

**ABSTRACT OF THE DISCLOSURE**

A gas inflation/evacuation system for use with occlusive devices in vascular procedures. The gas inflation/evacuation system is removably connectable to a proximal portion of a guidewire assembly and includes a first syringe system to evacuate air from the guidewire and a second syringe system for introducing a biocompatible gas under pressure into the guidewire to inflate an occlusive balloon a plurality of times. A sealing system is also removably connectable to the proximal portion of the guidewire assembly and selectively seals the proximal portion at one of a plurality of separate locations to form an airtight seal of the guidewire. Each time a deflation of the occlusive device is desired to reestablish blood flow to the vessel downstream of the occlusive device, the proximal portion of the guidewire preferably is cut distal to the location of the last seal to quickly deflate the occlusive device.